



# UNITED STATES PATENT AND TRADEMARK OFFICE

*CV*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,101	07/11/2003	Joseph R. Byrum	MSUT:008US	3878
32425	7590	05/05/2006	EXAMINER	
FULBRIGHT & JAWORSKI L.L.P.			ROBINSON, KEITH O NEAL	
600 CONGRESS AVE.				
SUITE 2400			ART UNIT	
AUSTIN, TX 78701			PAPER NUMBER	
			1638	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/618,101

Applicant(s)

BYRUM ET AL.

Examiner

Keith O. Robinson, Ph.D.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 33-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date December 2, 2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I (claims 1-32) in the reply filed on March 9, 2006 is acknowledged. The traversal is on the ground(s) that there is no additional search burden in examining Groups II-VIII together with Group I (see pages 2-3 of 'Response to Restriction Requirement' filed March 9, 2006). This is not found persuasive because as stated in the Office Action mailed February 9, 2006, the inventions are distinct because the claimed soybean plant can be used in a materially different process (see page 3, 2<sup>nd</sup> paragraph). In addition, searching the invention of group I together with the invention of groups II-VIII would impose a serious search burden. Search of each of these inventions would require different key word searches of each compound and of each distinctive step of the method using divergent patent and non-patent literature databases. The different searches would then require subsequent in-depth analysis of the unrelated prior art literature, placing a serious burden on the Office in terms of both search and examination.

The requirement is still deemed proper and is therefore made FINAL.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Objections***

3. Claim 8 is objected to because of the following informalities: It is suggested that the claim read: The tissue culture of claim 7, wherein the regenerable cells are embryos, meristematic cells, pollen, leaves, roots, root tips or flowers or are protoplasts or callus [derived] produced therefrom.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112, first paragraph – Written Description***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are broadly drawn to any agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, parts thereof and methods of using said soybean.

The specification fails to provide an adequate description of the broad genus of agronomically elite soybean plants having a mean whole seed total protein content of

between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield in terms of their genetic, morphological and/or physiological characteristics.

The specification only provides a written description of soybean varieties 0007583 (see page 43, line 17 to the top of page 49), 0008079 (see page 49, line 6 to page 52, line 23), 0137335 (see page 52, line 27 to page 54, line 24), 0137472 (see page 54, line 28 to the end of page 56), 0137441 (see page 57, line 3 to page 59, line 25) and 0137810 (see page 59, line 29 to page 62).

The Federal Circuit has recently clarified the application of the written description requirement. The court stated that a written description of an invention "requires a precise definition, such as by structure, formula, [or] chemical name, of the claimed subject matter sufficient to distinguish it from other materials". *University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1568; 43 USPQ2d 1398, 1406 (Fed. Cir. 1997). The court also concluded that "naming a type of material generally known to exist, in the absence of knowledge as to what that material consists of, is not description of that material". *Id.* Further, the court held that to adequately describe a claimed genus, Patent Owner must describe a representative number of the species of the claimed genus, and that one of skill in the art should be able to "visualize or recognize the identity of the members of the genus". *Id.*

See MPEP Section 2163, page 156 of Chapter 2100 of the August 2001 version, column 2, bottom paragraph, where it is taught that

[T]he claimed invention as a whole may not be adequately described where an invention is described solely in terms of a method of its making coupled with its function

Art Unit: 1638

and there is no described or art-recognized correlation or relationship between the structure of the invention and its function. A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between that function and the structure of the sequence, normally is not a sufficient identifying characteristic for written description purposes, even when accompanied by a method of obtaining the claimed sequence.

Given the failure of the specification to describe the claimed soybean plant, methods of using it are also inadequately described. Accordingly, one skilled in the art would not have recognized Applicants to have been in possession of the claimed invention. See the written description guidelines published in Federal Register/ Vol. 66, No. 4/ Friday January 4, 2001/ Notices: pp. 1099-1111.

See *University of Rochester v. G.D. Searle & Co., Inc.*, 68 USPQ2d 1424, 1433 (DC WNY 2003), which teaches that method claims are properly subjected to a written description rejection if the starting material required by that method is itself inadequately described.

The MPEP states "[t]o satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. See, e.g., *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1563, 19 USPQ2d at 1116. However, a showing of possession alone does not cure the lack of a written description. *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, *323 F.3d 956, 969-70, 63 USPQ2d 1609, 1617 (Fed. Cir. 2002)*".

See *Vas-Cath Inc. v. Mahurkar* 1991 (CA FC) 19 USPQ2d 1111, 1115, which teaches that the purpose of the written description is for the purpose of warning an

innocent purchaser, or other person using a machine, of his infringement of the patent; and at the same time, of taking from the inventor the means of practicing upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is, or different from its ostensible objects, that the patentee is required to distinguish his invention in his specification.

***Claim Rejections - 35 USC § 112, first paragraph - Enablement***

6. Claims 15 and 30-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims are broadly drawn to any agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, parts thereof and methods of using said soybean.

Since the seed is essential to the claimed inventions (soybean variety SN30003), it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. If the plant is not so obtainable or available, the requirements of 35 U.S.C. 112 may be satisfied by a deposit of the plant. The specification does not disclose a repeatable process to obtain the plant and it is not apparent if the plant is readily available to the public. Thus, a deposit is required for enablement purposes. A deposit of 2500 seed of each of the claimed embodiments is considered sufficient to ensure public availability. If the deposit is made under the terms

of the Budapest Treaty, then an affidavit or declaration by applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the specific strain has been deposited under the Budapest Treaty and that the strain will be irrevocably and without restriction or condition released to the public upon the issuance of a patent, would satisfy the deposit requirement herein.

If the deposit has not been made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 C.F.R. 1.801-1.809, applicants may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number, showing that

- (a) during the pendency of this application, access to the invention will be afforded to the Commissioner upon request;
- (b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;
- (c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the effective life of the patent, whichever is longer;
- (d) a test of the viability of the biological material at the time of deposit (see 37 C.F.R. 1.807) and,
- (e) the deposit will be replaced if it should ever become inviable.

The specification does provide a deposit for soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 (see page 41, line 13 to page 42,



line 25), but this does not provide enablement for claims 15 and 30-32, because these claims require soybean variety SN30003.

7. Claims 1-29 and 32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810, does not reasonably provide enablement for any and every agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

*In re Wands*, 858F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988) lists eight considerations for determining whether or not undue experimentation would be necessary to practice an invention. These factors are: the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples of the invention, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art, and the breadth of the claims.

Claims 1-14 and 19-22 are broadly drawn to any agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, parts thereof and methods of using said soybean.

Art Unit: 1638

The specification fails to provide any guidance regarding the genetic, morphological and/or physiological characteristics of the claimed invention. The specification only provides guidance for soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 (see pages 43-62).

Claims 10-14 further comprise the broadly claimed invention having a single locus conversion; however, the specification fails to provide any guidance with regard to the function of said locus nor is there any guidance with regards to how such a conversion may affect the genetic, morphological and/or physiological characteristics of the claimed invention.

It would require undue trial and error experimentation for one skilled in the art to screen literally thousands of soybean plants to determine which, if any, soybean plants were agronomically elite with a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield. In addition, it would require undue trial and error experimentation for one skilled in the art to screen for every possible single locus conversion that would stably insert into the genome of the claimed invention.

Claims 15-18, 23-32 are broadly drawn to any agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield wherein said soybean plant is produced by crossing any soybean plant with soybean plant variety SN30003 (claims 15-18) or with any agronomically elite soybean plant of any variety having a mean whole seed total protein

content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield (claims 23-32).

The specification fails to provide any guidance regarding the other soybean plants used in the cross to produce the claimed invention in terms of their genetic, morphological and/or physiological characteristics. Furthermore, it would require undue trial and error experimentation for one skilled in the art to make and use the claimed invention because one skilled in the art would have to screen literally thousands of soybean plants to determine which, if any, when crossed by the claimed parent would produce soybean plants that are agronomically elite with a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield.

It is known in the art that breeding varieties is unpredictable and that it is very unlikely that two breeders will produce the exact same plant when making crosses using the same parental starting material. In fact the specification states, "[t]his unpredictability is because the breeder's selection occurs in unique environments, generally with no control at the DNA level...and with millions of different possible genetic combinations being generated. A breeder of ordinary skill in the art cannot predict the final resulting lines he develops...The same breeder cannot produce the same variety twice by using the exact same original parents and the same selection techniques" (see page 14, lines 18-24).

Given the breadth of the claims, the lack of guidance regarding the background of the claimed invention and the unpredictability in producing the same plant when

making crosses using the same parental starting material, it would require undue trial and error experimentation for one skilled in the art to make and use the invention as claimed.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-14 and 16-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Cober et al (Crop Sci. 40: 39-42, 2000). As the claims are not adequately described as discussed above, the claims read on any soybean variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield.

Cober et al disclose soybean lines, namely X3585-69-1-B, X3585-136-4-B, X3585-6-6-B, X3585-116-4-B and X3585-116-3-B, that have whole seed total protein content between 44% and 50%, total protein plus oil content between 64% and 70% and a commercially significant yield (defined on page 38, lines 19-22 of the specification as at least 35 bushels per acre) (see page 41, Table 3). In addition, Cober et al disclose methods of using the disclosed soybean varieties (see page 42, 1<sup>st</sup> column, last paragraph).

The soybean lines taught by the prior art differs from the claimed soybean plant in their method of making, namely by the use of different parental material. However,

Art Unit: 1638

the method of making the claimed soybean plant would not distinguish it from the prior art soybean plant. See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products. See *In re Best*, 195 USPQ 430, 433 (CCPA 1997), which teaches that where the prior art product seems to be identical to the claimed product, except that the prior art is silent as to a particularly claimed characteristic or property, then the burden shifts to Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention.

10. Claims 1-14 and 16-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox (Crop Sci. 38: 900, 1998). As the claims are not adequately described as discussed above, the claims read on any soybean variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield.

Wilcox discloses soybean germplasm, namely C1944 and C1945, that have whole seed total protein content between 44% and 50%, total protein plus oil content between 64% and 70% and a commercially significant yield (defined on page 38, lines 19-22 of the specification as at least 35 bushels per acre) (see page 900, 1<sup>st</sup> and 2<sup>nd</sup> columns). In addition methods of using the claimed soybean variety are also rejected (claims 16-29).

The soybean lines taught by the prior art differs from the claimed soybean plant in their method of making, namely by the use of different parental material. However,

Art Unit: 1638

the method of making the claimed soybean plant would not distinguish it from the prior art soybean plant. See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products. See *In re Best*, 195 USPQ 430, 433 (CCPA 1997), which teaches that where the prior art product seems to be identical to the claimed product, except that the prior art is silent as to a particularly claimed characteristic or property, then the burden shifts to Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention.

***Claim Rejections - 35 USC § 102/103***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 15 and 30-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wilcox et al (Crop Sci. 35: 1036-1041, 1995). The claims read on any agronomically elite soybean plant of any

Art Unit: 1638

variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield wherein said soybean plant is produced by crossing any soybean plant with soybean plant variety SN30003.

Wilcox et al disclose soybean strains, namely CX1038-14, CX1307-205, Cutler 71 and Hamilton, that are agronomically elite wherein said strains have a protein content of between 44% and 50%, a total protein plus oil content of between 64% and 70% and a commercially significant yield (defined on page 38, lines 19-22 of the specification as at least 35 bushels per acre), wherein said soybean strain are produced by crossing the high yielding soybean variety Cutler with the high protein soybean variety Pando (see pages 1037-1038, 'Materials and Methods' and page 1037, Table 1).

Wilcox et al do not teach the use of soybean plant variety SN30003 in the production of agronomically elite wherein said strains have a protein content of between 44% and 50%, a total protein plus oil content of between 64% and 70% and a commercially significant yield.

The soybean plant taught by the prior art differs from the claimed soybean plant in their method of making, namely by the use of different parental material. However, the method of making the claimed soybean plant would not distinguish it from the prior art soybean plant. See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products. See *In re Best*, 195 USPQ 430, 433 (CCPA

Art Unit: 1638

1997), which teaches that where the prior art product seems to be identical to the claimed product, except that the prior art is silent as to a particularly claimed characteristic or property, then the burden shifts to Applicant to provide evidence that the prior art would neither anticipate nor render obvious the claimed invention.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to produce an agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield by crossing a high yielding soybean variety with a high protein soybean variety.

One of ordinary skill in the art would have been motivated to produce an agronomically elite soybean plant of any variety having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield because Wilcox et al teach "that high seed protein can be backcrossed to a soybean cultivar, fully recovering the seed yield of the cultivar, suggesting the absence of physiological barriers to combining high seed protein with high seed yield" (see page 1036, 'Abstract').

In addition, one of ordinary skill in the art would have reasonable expectation of success based on the above teaching of Wilcox et al.

14. Claims 16-29 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wilcox et al (Crop Sci. 35: 1036-



Art Unit: 1638

1041, 1995). The claims read on methods of producing a soybean seed comprising crossing the soybean plant of claim 1 with another soybean plant or with itself, wherein the plant of claim 1 is an agronomically elite soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, and plants produced from said methods.

Wilcox et al disclose a method of producing a soybean comprising crossing a soybean plant with seed total protein content of between 44% and 50% and a mean seed total protein plus oil content of between 64% and 70% with another soybean plant having a commercially significant yield (see page 1037-1038, 'Materials and Methods').

Wilcox et al do not teach methods of producing a soybean seed comprising crossing the soybean plant of claim 1 with another soybean plant or with itself, wherein the plant of claim 1 is an agronomically elite soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to use a method of producing a soybean seed comprising crossing the soybean plant of claim 1 with another soybean plant or with itself, wherein the plant of claim 1 is an agronomically elite soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield.

One of ordinary skill in the art would have been motivated to produce such

methods because Wilcox et al teach "that high seed protein can be backcrossed to a soybean cultivar, fully recovering the seed yield of the cultivar, suggesting the absence of physiological barriers to combining high seed protein with high seed yield" (see page 1036, 'Abstract').

In addition, one of ordinary skill in the art would have reasonable expectation of success based on the above teaching of Wilcox et al.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 15 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox (Crop Sci. 38: 900, 1998), in view of Conway (U.S. Patent No. 6,140,556, October 31, 2000). The claims read on methods of producing an agronomically elite

Art Unit: 1638

soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, wherein the method uses the soybean variety SN30003 in a cross with another soybean variety.

Wilcox teaches an agronomically elite soybean plant, namely C1944, having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield. The specification teaches that C1944 is soybean variety SN30003 (see page 43, lines 21-24).

Wilcox does not teach using C1944 (also known as SN30003) in a cross with another soybean variety.

Conway teaches using a soybean cultivar in a cross with another soybean cultivar to produce novel soybean cultivars.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the teachings of Wilcox and Conway to produce a method of producing an agronomically elite soybean plant having a mean whole seed total protein content of between 44% and 50%, a mean whole seed total protein plus oil content of between 64% and 70% and a commercially significant yield, wherein the method uses the soybean variety SN30003 in a cross with another soybean variety.

One of ordinary skill in the art would have been motivated to produce such methods because Wilcox teaches "[t]he lines will be useful for increasing seed protein while minimizing the seed oil content" (see page 900, 1<sup>st</sup> column, 1<sup>st</sup> paragraph).

In addition, one of ordinary skill in the art would have reasonable expectation of success based on the teachings of Conway (see column 7, lines 1-58).

**Conclusion**

18. No claims are allowed.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith O. Robinson, Ph.D. whose telephone number is 571-272-2918. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Keith O. Robinson, Ph.D.

April 19, 2006

DAVID H. KRUSE, PH.D.  
PRIMARY EXAMINER

